

# PCT100/PCT200 Sensor Tag

## Powercast® High-Function RFID Sensor Tags



### DESCRIPTION

The Powercast PCT100 and PCT200 Sensor Tags enable RFID based monitoring of environmental conditions including temperature, humidity, and light level. Depending on the configuration desired, one, two or all three sensors can be supported on a single tag.

The PCT100 Sensor Tag is a high-function RFID tag capable of measuring temperature, humidity, and light level with high accuracy. The tag harnesses the capability of the Powercast Powerharvester® Chipset to enable long range, high-function RFID all without the need for an on-board battery. The tags are designed to maximize the RF to DC conversion efficiency of the energy provided by an RFID reader. Using this energy, sensor measurements can be taken and then read back out of the tag's memory using any standard UHF RFID reader. Powercast's technology enables a completely maintenance-free and battery-free sensing and tracking solution for UHF RFID applications.

The PCT200 family adds a rechargeable battery to enable long lasting data logging capabilities while outside of the RFID reader's field. The tag has customizable data reading capabilities that can be easily set through a user friendly interface. The tag uses the RFID Reader's field to recharge the on-board battery while the data is being downloaded. This allows the tag to be reusable without the need to plug-in or change batteries.

### APPLICATIONS

Medical Asset Tracking and Monitoring  
Smart Grid  
Building Automation  
Logistics  
Asset Monitoring  
Supply Chain Management  
Materials Management  
Industrial Monitoring

### PCT100/PCT200 FEATURES

- EPC Class 1 Gen 2 compliant
- ISO/IEC 18000-6C compliant
- 10 meter read range
- High sensor accuracy



- "Find Tag" feature – enables locating one specific tag by illuminating an on-board LED
- Wide RF operating range: -17dBm to +20dBm
- Frequency range: 860MHz to 960MHz
- Compact and convenient hard case packaging
- RoHS compliant
- High RF to DC conversion efficiency - up to 75%
- -40 to +85C operational temperature range

### PCT100 SPECIFIC FEATURES

- Completely battery-free wireless sensing
- Data accessible in user memory
- Fast read rate

### PCT200 SPECIFIC FEATURES

- Up to 1 month of battery life without recharging
- Battery is recharged using the RFID reader's field (no wires to plug in, no batteries to change)
- Customizable data read times from 1 minute to 1 hour
- Stores maximum, minimum, and average values in user memory
- Read times and dates are available along with sensor data

### ORDERING INFORMATION

PCT100 and PCT200 tags are available in every sensor configuration of temperature, light and humidity possible.

## PCT 1 00 - XYZ

<b>PCT</b> Tag series	Version <b>100</b> = Battery Free <b>200</b> = Datalogging	XYZ (Sensors Desired) <b>T</b> = Temperature <b>H</b> =Humidity <b>L</b> = Light
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